In-Depth Study on the Affordability, Cost-Recovery and Maintenance Aspects of the Proposed Water Supply and Sanitation Projects at Jajmau (Kanpur) & Mirzapur

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PREFACE

This In-depth study on affordability, Cost-recovery and maintenance aspects of the proposed water supply and sanitation projects at Jajmau (Kanpur) and Mirzapur was conducted at the Giri Institute of Development Studies, Lucknow by my colleagues Shri Ashutoshi Joshi and Dr Y.P. Singh. The study was sponsored by the Indo-Dutch Environmental and Sanitary Engineering Projects, Kanpur, who also provided the necessary financial assistance. We are grateful to the Indo-Dutch Environmental and Sanitary Engineering Project in general and to Mr Ed.Frank, Socio-Economist with the project in particular for their help and keen interest.

We would also like to place on record our gratitude to the Officials of Kanpur Nagar Mahapalika, Mirzapur Nagar Palika and the Kanpur and Mirzapur Jal Sansthans for their help and cooperation in making the necessary data available to us.

The task of collecting, codifying and tabulating the data was handled by Shri R.C.Tyagi, who worked as Research Fellow in the project and the report was typed by Shri K. Manoharan. We thank both these colleagues for their help and cooperation.

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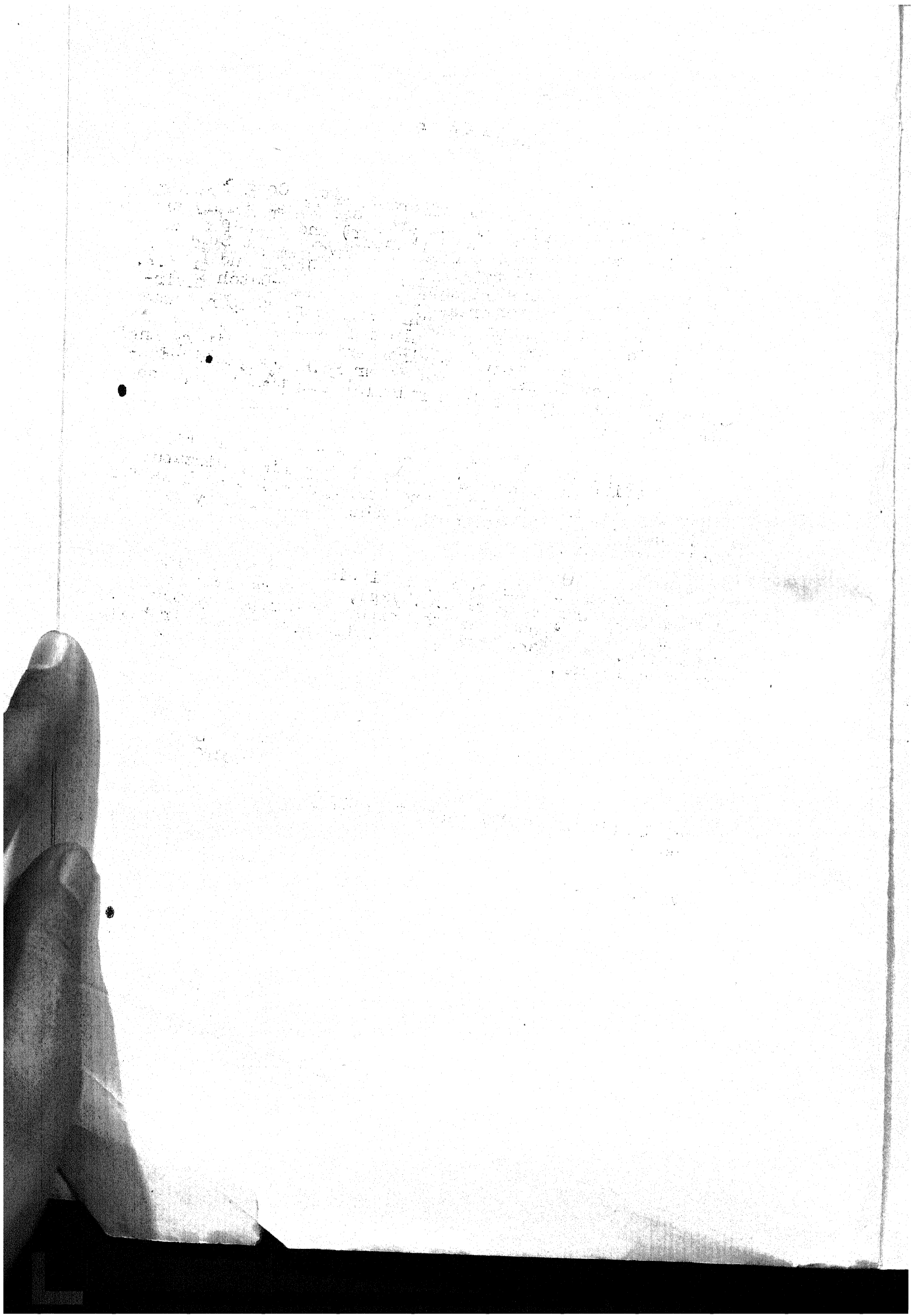

IN-DEPTH STUDY ON THE AFFORDABILITY, COST-RECOVERY AND MAINTENANCE ASPECTS OF THE PROPOSED WATER SUPPLY AND SANITATION PROJECTS OF JAJMAU, KANPUR AND MIRZAPUR

1. General Introduction

The Institute undertook the in-depth study in Jajmau, Kanpur and Mirzapur where Dutch financial assistance is forthcoming for water supply and sanitation projects under the Ganga Action Plan. The basic objective of the study was to carry out a short survey so as to look into the affordability, cost recovery and maintenance aspects of these schemes.

In the case of Kanpur and Dutch agency had identified four areas which are to be taken up initially under the crash programme and so our survey was undertaken in those selected sites. In Mirzapur, however, we were informed that no sites have been selected for the crash programme and that the programme for the whole of Mirzapur is to be taken up. The socio-economic unit of the Dutch agency had, in any case, identified about eight problem areas in Mirzapur. We, therefore, selected four out of the eight problem areas for the purpose of our survey.

2. Sample size and Methodology

The sample, because of time constraint, was to be a small one so we took up 50 households each from Jajmau, Kanpur and Mirzapur respectively. The sample from each city was evenly

distributed in the four areas. Three things were kept in mind at the time of selection of the respondents. The sample was designed so as to cover the low income as well as the middle income groups. Households having a monthly income of upto Rs.400.00 were treated in the low income category while those with a monthly income of Rs.500.00 and above were considered as middle income households. Barring a few cases the middle income group constituted of households whose income per month ranged between Rs.500.00 to Rs.1,500.00.

The second consideration in sample selection was availability or otherwise of water supply and sanitation facilities of the households. Care was therefore, taken to ensure that sample households with and without private water supply as well as with and without private latrines were represented as far as possible. And finally the sample was spread over the area and not confined to any particular pocket so that we could have a better representation of the area in question.

A structured questionnaire was prepared in order to obtain information related to caste structure, family size, educational background of the head of household, occupational distribution and levels of household income, and existing housing, waster supply and sanitation facilities. One section of the questionnaires dealt with the people's willingness to pay for the cost of water supply and sanitation as well as for its

maintenance. Their willingness to offer free services both in construction and maintenance of these services was also recorded.

The socio-economic unit of the Dutch agency was to carry out a base line survey in Kanpur as well as Mirzapur. We were to get relevant information from this survey so that we could add the same and offer a more detailed analysis of the areas. Unfortunately we could not have access to this information. Consequently our report is based entirely on our own findings.

KANPUR

3. General Picture of the Selected Areas of Jajmau (Kanpur)

(a) Oancha Tila

This area is situated along the banks of the Ganga river and, as the name itself suggests, is an alleviated area having a population of around 5000. Most of the working population of this locality are engaged in the various tanneries which are concentrated in Jajmau. The daily wages in the tanneries range from Rs.18.00 to Rs.25.00. A small part of the population is engaged in their own business while some are white collar workers.

In the caste structure Muslims dominate accounting for around four-fifth of the total population. The remaining population is Hindu out of which nearly 80 per cent is Scheduled Caste.

Both drinking water and sanitation are major problems of this area. Some of the big tannery owners have their private tubewells and the population is heavily dependent on them for their daily water requirements. The area has 17 wells out of which as many as 13 are dry. Out of the remaining 4 two have very dirty water so effectively only two wells are in actual use. Out of the four public hand pipes only 1 is in working condition. There are around fifteen public taps but the water pressure is very low and supply erratic. Sanitation too is a basic problem with people either having bucket type latrines or they find open spaces to attend to the call of nature. A sewer line was under construction at the time of this survey.

(b) Chabila Purwa

This is a village under the Jajmau area of Kanpur having a total population of around 4600. Here too we find Muslims, Hindus and Scheduled Castes forming the total population. Being a poor area most of the working population comprises of wage labourers.

It is a road side village which does not have a very acute water shortage problem. There are around 20 wells which cater to the daily requirements of the residents. Although there are no hand pipes but there are six public taps. Only in the taps that are located in the low lying areas the water pressure is good.

The really acute problem of this area is that of public sanitation. The area does not have a sewer line. Although two public latrines were constructed by the Kanpur Nagar Mahapalika. They are at present in a dilapidated condition and, therefore, not in use. The people are therefore left with no option but to go to open spaces to ease themselves. This is extremely inconvenient especially for the ladies.

(c) Gajju Purwa

Although Gajju Purwa too is linked by road to the other areas it is basically a slum with a total population of around 4000. Since there are quite a few tanneries around it a high percentage of the workers are engaged in these tanneries. Thus a high percentage of the population is either Muslim or Scheduled Caste. Like the Ooncha Tila area, this area too is faced with a serious water supply and sanitation problem. Out of the 20 wells as many as 15 are dry. Similarly, out of a total of 10 public taps only two are in working condition. The area at present has no hand pipes. However, around seven persons have installed their own hand pipes.

Sanitation again is a serious problem with only some people having bucket type latrines. The rest are again forced to find open space since the lone public service latrine of the area is not in use.

(d) Om Purwa

Out of the four selected areas of our study Om Purwa is the most thickly populated having a total population of around 14000. Nearly three-fourth of the total population is Scheduled Caste while the rest are Hindus, Muslims and others. This is basically a labour colony so majority of the workers are wage earners. There are however a few who are relatively well off.

Water supply is the major problem of the area since there are only three wells in use out of a total of 35 wells. A large number of people have bored their own hand pipes and so they are providing water to the needy people. The entire area has only one public hand pipe. Although there are ten public taps the water pressure is very low and people are unable to make use of these taps. A big dairy owner of this area has a machine operated water lifting bore and many people from the adjoining areas go to him to fetch water for their daily needs.

A sewer line has been recently laid in Om Purwa and some people have taken private connections to the sewer line. For this they have had to pay Rs.550.00 each although the receipt they received was for Rs.250.00 only. Others who have private latrines have the bucket type latrines.

4. General Characteristics of the Population

Our sample, on the whole, was evenly distributed between Hindus, Muslims and Scheduled Castes which constituted 40, 34 and 26 per cent of the respondents in that order. Although

the different areas have variations in the cast structure of population our sample was not aimed towards this end. However, in the case of Ooncha Tila even our sample had an 85 per cent Muslim population while that of Om Purwa had 75 per cent Scheduled Caste population which was in conformity with the overall caste structure of the two areas.

The educational level of the head of the household turned out to be rather low with almost 90 per cent heads of the households being either illiterate or could only read or write. This could be expected in areas where the labour class dominates. Only four out of the 50 respondents had studied upto the Intermediate level while one had educational qualifications above Intermediate. Between the four areas there was not much variation in the educational levels of the respondents.

Looking at the aspect of housing it was found that over half the houses (54 per cent) were kuchha houses made of mud. Ooncha Tila had a very high percentage of such houses (93 per cent). Around 10 per cent houses were only partly kuchha. In Chabila Purwa almost one third houses were of this type. The remaining houses of the sample were pucca houses. In the areas of Gajju Purwa and Om Purwa our sample had an almost even distribution of kuchha and pucca houses. People having kuchha houses also had relatively lesser accommodation. Thus in Ooncha Tila the houses had only one or two rooms. At other places a higher number of respondents had three or more rooms.

The average family size worked out to 6.7 for the four areas taken together. There were, however, variations between the areas with the lowest family size of 5.4 in Ooncha Tila against the highest of 8.2 in the case of Chabila Purwa. Gajju Purwa and Om Purwa had an average family size of 7 and 6.5 respectively.

Our sample had a total of 67 workers. Of these around 39 per cent were service class engaged mainly in the tanneries of Jajmau. 29 per cent of the workers were small businessmen or petty traders. Wage earners of our sample constituted around 16 per cent of the total workers. A small percentage (9 per cent) were self-employed while the remaining had other occupations. In Ooncha Tila the working population was mainly employed either in the tanneries or doing some small business. In Chabila Purwa as well as Gajju Purwa the working population was almost evenly distributed in the four broad occupational categories mentioned above. In Om Purwa a high proportion of workers were service class.

We split the house-hold income into three groups. The lowest were those whose monthly household income was upto Rs.400.00. The second group constituted of housholds having a monthly income ranging between Rs.401 to 800. The third income group had monthly income in excess of Rs.800. Around 42 per cent of the total households fell in the lowest category.

One-fourth were found in the second category while the remaining were had income exceeding to Rs.801.00. The average household income of the four areas taken together worked out to Rs.1,020.00. Gajju Purwa (Rs.708.00) and Ooncha Tila (Rs.861.00) had relatively low per household incomes as compared to Om Purwa and Chabila Purwa where the average household income per month was found to be Rs.1196.00 and Rs.1342.00 respectively.

Existing Water Supply and Sanitation Facilities in the Sample Households.

(a) Water Supply

Our structured questionnaire aimed at bringing out maximum information from the respondents related to water supply and sanitation facilities as exist in these areas at present.

Out of our total sample only 20 per cent respondents were having their own source of water supply. Chabila Purwa was best off in this regard with five out of the twelve households having private tap connections. The other areas where we found one case each of a private tap connection were Ooncha Tila and Om Purwa. However, in five out of these seven cases it was reported that the water supply was very irregular and on an average they got water for less than two hours per day under optimum conditions. There were no fixed timings when these people could be sure of having water in their taps. The remaining three respondents who had their own source of water had hand pipes and so had no water scarcity and were allowing others tocome and take water from their hand pipes.

Those having a private tap connection have to pay water charges to the Jal Sansthan. The lone respondent of Ooncha Tila is paying Rs.100.00 per annum while that of Om Purwa Rs.400.00 per annum. The average water charges being paid by the five private tap connection holders of Chabila Purwa worked out to Rs.265.00 per household per annum. They were all soar over the fact that such high water charges have to be paid annually for such irregular and erratic water supply.

The remaining four-fifth population which has no individual source of water supply mainly rely on the wells in their respective areas for their daily water requirements. A few respondents did say that theywere taking water from the public taps but added that since the supply was irregular they had also to resort to the other sources such as wells. The tannery owners having private tubewells are another important source from where people constantly fetch water.

On an average the people are covering a distance of around 225 metres to fetch the water. There are only marginal variations in the distance covered to fetch water in the four selected areas of Jajmau.

To meet the daily water requirements the people have to make several trips per day to the source of water nearest to them. In the four areas taken together the average number of daily trips worked out to be eight. In Ooncha Tila and Gajju Purwa the average was seven while in the other two areas it was nine. The average overall time taken per trip was around

12 minutes. It was found lowest in the case of Om Purwa (approximately 8 minutes per trip) and highest in Gajju Purwa (15.5 minutes per trip). Gajju Purwa /as already indicated has a severe water problem.

Taking the average number of trips per day and the approximate time spent per trip the sample households of Jajmau area are, on an average, spending an hour and twenty five minutes per day to fetch water from the nearest source. In Ooncha Tila and Chabila Purwa the average time spent per household was around an hour and forty minutes whereas the average time per household was found to be relatively less in Gajju Purwa (1 hr.15 minutes) and Om Purwa (1 hr.5 minutes).

Water is being fetched by both men and women. Except in very few cases of Ooncha Tila the children are not fetching water. Between the areas there was not much variation except for Ooncha Tila where generally the male members are doing the task of fetching water.

In Chabila Purwa and Om Purwa people were generally satisfied with the quality of water they are getting. However two-third respondents of Ooncha Tila and around 60 per cent of Gajju Purwa have reported that the quality of water is not satisfactory.

We had also collected information from all areas about the average water requirement per day both total and for drinking and cooking purposes. The overall average water consumption worked out to be 37.06 litres per capita per day.

Out of this around 8.86 litres was being utilized for drinking and cooking purposes. In both Oncha Tila and Om Purwa the per capita total consumption came to around 42 litres while in the remaining two areas it was around 33 litres. Such a low per capita consumption clearly reflects the water problem which the people of these four areas are faced with. The Jal Sansthan in its report of the proposed water supply scheme under the Ganga Action Plan has taken a per capita daily requirement of 270 litres. If 270 litres is to be taken as the ideal amount then the present overall consumption of the four areas is less than 14 per cent of 270 litres and further highlights the water supply problem. Since fetching water involves wastage of both time and energy the people seem to be managing with the barest minimum quantity of water.

It is, therefore, essential that under the crash programme adequate arrangements should be made for providing clean and potable water in the selected areas. For this hand pipes should be installed. The norms fixed by UNICEF are that there should be a hand pipe for 50 households. This would imply that at least to begin with, 10 hand pipes each should be installed in Oncha Tila, Gajju Purwa and Chabila Purwa. In Om Purwa, where the population is much higher, about 25 hand pipes should be provided. Programme should thus be chalked out to provide 50-55 hand pipes in these four areas if the water problem connected with these areas is to be reduced and if the level of per capita water consumption is to be raised appreciably.

Care will have to be taken at the time of installation to ensure that maximum households can utilize the hand pipe. While this precaution will be helpful to the people it will also make the cost recovery simpler.

(b) Existing Sanitation Facilities

Only around one-fourth of the total respondents had private latrines and these were concentrated in Ooncha Tila and Chabila Purwa. In Om Purwa a new sewer line has been laid and some people have utilized this facility to connect their latrines to it but we had only one respondent from Om Purwa in our sample who had a private latrine. It was from him that we learnt that the official who had come to collect money for the sewer connection took away Rs.550.00 but gave a receipt of Rs.250.00 only. Nine out of the twelve private latrines are bucket types while two respondents of Ooncha Tila had a saptic tank.

Thus, out of the total sample three-fourth of the households did not have private latrines and people of these households had no alternative but to go to open spaces to attend to the call of nature. Two of the four areas viz. Chabila Purwa and Gajju Purwa did have public service latrines but they are no longer in use since they are in a bad shape. No one either the public themselves or the authorities have bothered over their cleanliness or maintenance.

Detailed discussions with various residents of the different areas, community leaders and other people of influence brought out the fact that in all the four areas people who have their own house are interested in opting for the low cost sanitation scheme. They are hardly keen on the construction of public service latrines since they have the space to construct the latrines. In many cases the existing bucket type latrines need to be converted to the septic tank type or be linked to the sewer line where there is one. But there are others who either do not have space for a private latrine or those who are living in rented houses. In the case of the former they can not think in terms of a private latrine for want of space while in the case of the latter they are not interested in spending money on this facility in a house of which they are only tenants. The landlord is least interested in spending money to facilitate his tenant. Keeping in view the problems of this section of the population it is essential that at least two eight-seat latrines be constructed in each of the four areas. This will not only provide relief to the population but will also solve many of the problems related to general hygene of the area concerned.

As has already been pointed out earlier both Gajju Purwa and Chabila Purwa have two unused public service latrines. These very sites may be taken up for the construction of the proposed public service latrines. This will solve the problem of finding suitable place in these areas and will also not involve payment of any compensation since it is a Mahapalika site. Thus the problem of finding suitable sites for locating

the public service latrines is to be taken care of only in Oancha Tila and Om Purwa. In neither of these places is the aspect of location likely to pose any serious problem.

Cost Recovery of Hand Pipes and Private/Public Latrines

(a) Hand Pipes

The cost of an India Mark II Hand Pipe on an average is estimated at around Rs.11,000.00 by the officials of the Jal Sansthan, Kanpur. Keeping in view the general economic condition of the people, described earlier in this report, it is felt that total recovery of the cost of a Hand pipe is not feasible. Moreover, such a step is not even desirable since provision of good quality free of cost is presumed to be the duty of the Government. In the past wherever the Mahapalika has provided either a public tap or a public hand pipe the service has always been provided free of cost. However, since the areas in question are problem areas and the people are facing genuine water problem they are willing to contribute towards this facility. Thus although one can think in terms of a cost recovery the recovery can at best be partial only.

Keeping the UNICEF norm of one hand pipe per fifty households in mind on one hand and the average cost of Rs.11,000.00 per hand pipe on the other, total recovery would imply that each household must contribute around Rs.200.00. In our

questionnaire we, therefore, kept three cost recovery options against which we got the responses from the sample households.

The first option involved a subsidy of 50 per cent. Thus each household is asked to pay Rs.100.00. Of this Rs.20.00 is to be paid initially and the rest in eight monthly instalments of Rs.10.00 each. The second option had a subsidy component of 75 per cent and each household pays Rs.50.00. The initial payment remains Rs.20.00 and the balance in six monthly instalments of Rs.5.00 each. For those respondents who felt the above options too expensive we left an open option where we let them decide how much they were willing to pay on their own free will.

Out of the total sample of 50 only six respondents declined to accept any of our three options. It had earlier been pointed out that ten of our respondents had their own source of water supply. It is from this group of ten that people have declined to contribute towards the cost of public hand-pipes. We still have four respondents who, despite their own private tap connection, have agreed to contribute towards the public hand-pipe since water supply through taps is irregular and in-sufficient.

Nearly half the respondents are willing to pay Rs.50.00 towards the installation of a hand-pipe while another 40 per cent are willing to contribute Rs.100.00 each. The four remaining respondents felt that they could not contribute in accordance with options one and two. They have however indicated their willingness to contribute Rs.25.00 each.

We also related cost recovery to the income levels of the respondents. Out of the 44 respondents willing to contribute towards the cost of the hand pipe 20 are in the lowest income group (below Rs.400.00 per month). The rest are almost evenly distributed among the two other income groups. There was a positive relationship between the level of income and proposed contribution. Thus more people from higher income group were willing to pay Rs.100.00 each while a higher percentage from the lower income group opted to pay Rs.50.00 each. All the open option cases were those of respondents who were in the lowest income group.

It is difficult to conceive of a system of public payment where we can discriminate one section from another for the same facility. So although we have had different responses regarding cost recovery we shall have to think in terms of a common amount that shall have to be collected from each household. We therefore feel that the option which offers a 75 per cent subsidy will be most suitable according to which each household will contribute Rs.50.00. Since nearly 90 per cent of the household have shown their willingness to contribute Rs.50.00 and above it may be possible that the rest might also be pursuaded into paying Rs.50.00. For this it may be necessary to make the system of payment more convenient by reducing the initial payment and increasing the number of instalments. Initially, therefore, we may ask for Rs.10.00 each and the balance in 10 monthly instalments of Rs.4.00 each.

(b) Maintenance of the Public Hand-Pipes

It is suggested that a nominal amount of rupees one be collected from each household to meet the maintenance cost of the hand-pipes. Since one hand-pipe per fifty household is being proposed, fifty rupees per month will thus be collected for its maintenance. The washers of the India Mark II hand-pipe need to be changed from time to time, but their cost is only around Rs.5.00 each. The pipe is otherwise of good quality and does not need much maintenance until. It is only when some major faults develop in it that heavier amount of money is needed for the repair work. The amount contributed per month i.e. Rs.50.00, should be sufficient to meet not only the expenditure on purchase of new washers but to meet the slightly higher costs of repair work when needed.

Only one out of our 50 respondents has declined to contribute towards the maintenance of the hand-pipe. It is primarily the general attitude rather than his paying capacity which prompted him to say no. This is so since many persons from all the areas were not sure as to how seriously the crash programme is to be undertaken. However, once the hand-pipe is installed this person may himself come forward to pay Rs.1.00 or may be easily motivated to do so.

(c) Low Cost Sanitation Scheme

The K.D.A. has worked out a low cost sanitation scheme under which the K.D.A. instals private latrines either connected

to the sewer line or having septic tank in the houses of willing persons. Its total cost is around Rs.1,250.00. Persons have to deposit an initial amount of Rs.250.00 while the rest is paid in easy instalments over 2-3 years.

Since sanitation is an important aspect under the Ganga Action Plan the low cost sanitation programme should be given a boost. However, it was felt that residents having low income and therefore finding it unmanageable to adopt the scheme may be given a 50 per cent subsidy. According to our proposal willing people will have to make an initial payment of Rs.150.00 and will subsequently pay Rs.12.50 per month for 3 years. We therefore asked the respondents whether they would be willing to get a clean and hygenic private latrine constructed if a subsidy of 50 per cent was offered. The response was highly encouraging with over 80 per cent respondents willing to adopt the low cost sanitation provided subsidy is given. The high degree of willingness implies that even the people from the lowest income strata are keen adopt this scheme.

Although we feel that a general subsidy of 50 per cent should be offered to everyone. However, if the authorities feel otherwise they may provide the subsidy to the people upto a certain income level only. The scheme might also be available to the SC/ST population.

(d) Public Service Latrines

The Kanpur Nagar Mahapalika Authorities had given us an estimated figure of Rs.50,000.00 as the average cost for constructing an eight-seat public sanitation complex. As against this figure the Sulabh International have their own separate cost estimates for 10 seat complexes having either sewer connection or septic tank. The estimated cost being Rs.1.77 lakhs and Rs.2.29 lakhs respectively. Since the estimates of Sulabh International are around four times as high as those of the Mahapalika it is not worthwhile to go for the Sulabh Complexes in these areas.

As far as the cost recovery aspect of the public sanitation scheme is concerned it is quite obvious that since cost involved is very high recovery can at best be low. We therefore asked people whether theywould be willing to pay Rs.250.00 towards the cost of this complex. Of this Rs.30.00 is to be paid initially and the rest in two years at the rate of Rs.10.00 per month. Besides this we also kept an open option where we allowed the respondent to suggest how much he could pay.

In all the four areas taken together only one respondent was found willing to pay Rs.250.00. Two more wanted to contribute but said that they could afford to pay Rs.80.00 and Rs.50.00 respectively. It is, therefore, evident that in thecase of the public service latrines peoples willingness is of a very low order, despite the fact that at present people have a genuine sanitation problem.

The respondents likewise were asked about their willingness to contribute Rs.5.00 per month towards the maintenance of the public service latrines. Here again the response was very poor with only two out of the 50 respondents found willing.

The low response in the case of public latrines can be directly linked to the high percentage of respondents who have already shown their willingness in favour of the subsidized low-cost sanitation scheme. However it must not be forgotten that there are numerous residents in these areas who either do not have space to construct a private latrine or do not have the means to afford it even after the subsidy and others who are living in rented houses. All these categories of people can not have the improved type latrines.

It should therefore be obligatory on the part of the state to ensure that the existing sanitary conditions be improved even if the entire cost of it has to be paid by it. The individual, especially illiterate or semi-literate can not very easily be asked to pay for these services through lectures on hygene. He has been so used to going out in open spaces that it does not really matter to him much specially if the alternative, even though more convenient, involves money.

6. Peoples Willingness to Offer Free Service in the Installation and Maintenance of Public Services.

Maintenance is an equally, if not more, important aspect of any public service facility. It is a crutial aspect and should therefore be looked into carefully. It is generally

observed that a public tap or a public hand-pipe once installed is rarely looked after and properly maintained either by the authority who put it up or by those who take water from it. The same was brought out by our survey in the four areas where we found broken taps and hand-pipes and abandoned public latrines.

It was observed from the annual budgets of the Mahapalika and Jal Sansthans of the respective cities that only a negligible percentage of their total budget is being spent on the maintenance aspect of either drinking water or sanitation. This aspect has to be taken up more seriously now than has been the case upto now particularly since many new hand-pipes, public taps and public service latrines are expected to come up under the crash programme. Until and unless maintenance is properly ensured these new facilities are likely to meet the same fate as was seen in the past.

From the people's response during our survey it was brought out that around 60 per cent respondents were willing to offer free services at the time of installation of a hand-pipe or the construction of public service latrines. Likewise, an equal number are also willing to extend their cooperation in the maintenance of these services. By and large those respondents who are willing to pay Rs.100.00 towards the cost of the hand-pipe and the ones not willing to offer their services since they feel their contribution has already been assured in monetary terms. However, a very large number of respondents are willing to get proper training in the operation and maintenance of the hand-pipes.

MIRZAPUR

General Characteristics of the Population

In the case of Mirzapur 60 per cent of our population was Scheduled Caste while around one fourth were Muslims. The rest were casteHindus. Between areas there were variations with Dev Purwa having a high Muslim population while in the case of Chandra Dipa and Ojhala Pul/Mallahan the population was predominently Scheduled Caste.

The educational level of the head of the household was low with 44 per cent being illiterate while an equal percentage could only read and write. The rest had education upto Intermediate only.

The state of housing facilities brought out that around 40 per cent respondents lived in Kuchha houses while an equal number in pucca houses. The houses of the remaining respondents were partly kuchha and partly pucca. A high percentage (58 per cent) had accommodation of three rooms or more. Chota Mirzapur being within the city had a higher percentage of pucca houses having three or more rooms each.

The average family size was found to be 8.5. Dev Purwa had the lowest average family size of 7.5 while in Ojhala pul/ Mallahan average family size was 9.4. In the 50 households there were only 51 workers. Of these around 62 per cent were wage earners. Their percentage was particularly high in Dev Purwa and Chandradeepa. The remaining workers were from the service class or were petty traders or the self-employed.

The households were divided into three groups according to the per household income per month. The lowest income group households having a monthly income of below Rs.400.00 formed only 14 per cent of our sample. No household figured in this group in Chota Mirzapur while in Chandradeepa only one household had a monthly income of upto Rs.400.00. Although 46 and 40 per cent households had a monthly income of between Rs.401.00 - Rs.800.00 and above Rs.801.00 respectively yet the average household income of the four areas taken together was only Rs.776.00 per month. In Chandradeepa and Ojhala Pul/Mallahan average household income was close to the overall average. Average income was found highest in Chota Mirzapur (Rs.987.50) and lowest in the case of Dev Purwa (Rs.553.85). The rather high percentage of wage earners explains the low average household income.

Existing Water Supply and Sanitation Facilities in the Sample Households

(a) Water Supply

Less than one-fourth of our sample had their own source of water supply of whom all except one had a private tap connection. There was one respondent who had a hand pump. Private taps were only found among the households of Dev Purwa and Chota Mirzapur. Of these most reported that water supply was irregular and under most favourable conditions they received water for around three and a half hours per day. Those having private taps were paying an annual water charge of around Rs.41.50. There was not much variation between Dev Purwa and Chota Mirzapur.

The remaining three-fourth respondents were mainly relying on the wells or public taps to meet their daily water requirements. In Chota Mirzapur total reliance was on public taps while in Chandra Deepa, which had no respondent with his own source of water, the respondents were fully dependent on the wells.

To fetch this water people were covering an average distance of around 200 metres. While in the case of Chota Mirzapur the people had to cover an average distance of about 230 metres the average distance in each of the remaining three areas was around 200 metres.

To meet the daily water requirements the people have to make several trips per day to the source of water nearest to them. In the four areas taken together, the average number of daily trips worked out to be ten. In Dev Purwa average daily trips was nine, in Chota Mirzapur average daily trips was eight, in Chandra Deepa it was ten and in Ojhala Pul/Mallahan average daily trips was twelve. Overall average time taken per trip worked out to be about 19 minutes. It was found lowest in t he case of Chota Mirzapur (approximately 14 minutes per trip) and highest in Ojhala Pul/Mallahan (approximately 25 minutes per trip). In Dev Purwa average time taken 17 minutes and in Chandra Deepa average time taken per trip 18 minutes.

Taking the average number of trips per day and the approximate time spent per trip the sample households of four sampled areas are, on an average, spending two hours and fifty five minutes, per day to fetch water from the nearest source. In Dev Purwa and Chandra Deepa the average time spent per household was around three hours, whereas the average time per household was found to be relatively less in Chhota Mirzapur (2 hours and 20 minutes) and Ojhala Pul/Mallahan (2 hours and 55 minutes).

Water is being fetched by all family members including Male, Female and Children. In four selected areas of Mirzapur mainly Men are doing this work. In Chota Mirzapur and Chandra Deepa number of Children fetching water are less than Ojhal Pul/Mallahan and Dev Purwa. Only two children and three children are fetching water from nearest source of water in Chota Mirzapur and Chandra Deepa are areas respectively while six children in Dev Purwa and eight children on Ojhala Pul/ Mallahan were fetching water. Females are also taking active part in fetching water in all the four areas. Regarding the quality of water people were generally satisfied with the quality of water they were getting in all the selected areas. In Dev Purwa 100 per cent people are satisfied with the quality of water and in Chota Mirzapur, Chandra Deepa and Ojhala Pul/ Mallahan around 16 per cent reported that the quality of water is not satisfactory.

We also collected information from all four selected areas about the average water requirement per day both total and for drinking and cooking purposes. The overall average water consumption worked out to be 34.78 litres per capita per day. Out of these around 7.27 litres was being utilized for drinking and cooking purposes. In three out of four selected areas the per capita total consumption come to around 34 litres, and in Chhota Mirzapur it was 28.23 litres. It shows a very low consumption of water in all four areas. Such a low per capita consumption clearly indicates the acute water problem which the people of these four areas are faced with. The Jal Sansthan Kanpur in its report of the proposed water supply scheme under the Ganga Action Plan has taken a per capita daily requirement of 270 litres. If 270 litres is to be granted as the ideal amount then the per cent overall consumption of the four areas are less than 13 per cent of 270 litres and further highlights the water supply problem. Since fetching water involves wastage of both time and energy the people seem to be managing with the barest minimum quality of water. The Jal Sansthan authorities of even Mirzapur feel that the daily per capita consumption of water should be around 170 litres and that too is many times what is being actually consumed.

It is, therefore, essential to provide more facilities of safe drinking water in these four areas. For this hand pumps should be installed so that people can take safe drinking water from these hand pumps round the clock. The norms fixed by UNICEF are that there should be a hand pump for 50

households. This would imply that atleast to begin with 5 to 7 hand pumps each should be installed in all four selected areas. Programmes should thus be chalked out to provide 25 to 28 hand pumps in these four areas if the water problem connected with these areas is to be reduced and if the level of per capita water consumption is to be raised appreciably. Care will have to be taken at the time of installatinn to ensure that maximum households can utilize the hand pump while this precaution will be helpful to the people it will also make the cost recovery simpler.

While talking of installing hand pumps in Mirzapur we can point out the suggestion given by the Municipal Authorities of Mirzapur that the existing wells which are not in use should be properly cleaned so that they can be used by the public for fetching water. Moreover it is also suggested that the existing wells be adequately covered and ordinary hand pumps be installed in them such that a lot of time and energy be saved. Moreover, while an India Mark-II costs around Rs.15,000.00 in the case of Mirzapur the ordinary one is estimated to cost only around Rs.1,500.00. Add to it the cost of repair or minor construction around the existing wells and even then total cost will only be around one-fourth of what the India Mark II is estimated to cost. If this is done effectively then a fewer number of India Mark II hand pumps will have to be installed in these areas than that proposed earlier.

(b) Existing Sanitation Facilities

Only around 14 per cent of the total respondents had private latrines and there were constructed in two areas out of four selected areas namely Dev Purwa and Chhota Mirzapur. These two areas Dev Purwa and Chhota Mirzapur are situated in the Urban part of the city and having sewer line facility. Although this line is not working properly even then some people are utilizing this line in their areas. On the other hand there is no any kind of private latrines in our sample households in the other two areas Chandra Deepa and Ojhala Pul/Mallahan. The main reasons are that these two areas situated in rural part of the city and that there is no sewer line facility in these two areas and finally now people are very much use to and habitual to go for natural call in open space Thus out of the total sample 86 per cent of the households did not have private latrines and such persons, particularly in Chandra Deepa and Ojhala Pul/ Mallahan had no alternative but to go to open space to attend to the call of nature. There are four bucket type latrines in Dev Purwa and two bucket type latrines in Chhota Mirzapur and also single latrine with a saptic tank in Chota Mirzapur. No private latrine was found in Chandra Deepa and Ojhala Pul/ Mallahan in our sample. Out of these four selected areas only one area Dev Purwa did have public service latrine but this 20 seater latrine is no longer in use since this is in a bad shape. No one either from among public or the authorities have bothered over their cleanliness or maintenance. Detailed discussions with various residents of the different areas,

community leaders and other people of influence brought out the fact that in two areas specially Chhota Mirzapur and Dev Purwa people who have their own house are interested in opting for the low cost sanitation scheme. They are hardly keen on the construction of public service latrines since they have the space to construct the latrines. On other hand in the remaining areas namely Ojhala Pul and Chandra Deepa people are not having their own house as they are tenants of they are not having sufficient space for low cost private latrine, they are interested in public latrines. Moreover they are use to go in open space and now they are not keen to adopt any type of latrine. In many cases the existing bucket type of latrines need to be converted into the septic tank type or be linked to the sewer line where there is one. But there are others who either do not have space for a private latrine or those who are living in rented houses. In case of the former they can not think in terms of a private latrine for want of space while in the case of the latter they are not interested in spending money on this facility in a house of which they are only tenants. The landlord is least interested in spending money to facilitate his tenant. Keeping in view the problems of this section of the population it is essential that at least two eight seat latrines be constructed in each of the four areas. This will not only provide relief to the population but will also solve many of the problems related to sanitation and hygene of the area concerned.

Out of four selected areas in Mirzapur only Dev Purwa has one unused public service latrine. This site may be taken up for the construction of the proposed public service latrine. This will solve the problem of finding suitable place in the area and will also not involve payment of any compensation since it is a Mahapalika site. Thus the problem of finding suitable site for locating the public service latrines to be taken care of only in remaining areas Chhota Mirzapur, Chandra Deepa and Ojhala Pul/Mallahan.

Cost Recovery of Hand-pumps and Private/Public Latrines

(a) Hand Pumps

The cost of an India Mark II hand-pump on an average is estimated at around Rs.12,000.00 to Rs.15,000.00 depending upon normal and rocky surface by the officials of Jal Nigam, Mirzapur. Keeping in view the general condition and economic condition of the people of these four selected areas, discribed earlier in this report, it is felt that total recovery of the cost of a hand pump is not feasible. Moreover such step is not even desirable since provision of good quality free of cost is presumed to be the duty of the state. In the past where ever the Mahapalika has provided either a public tap or a public hand pump the service has always been provided free of cost. However, since the areas in question are problem areas and the people are facing genuine water problem they are willing to contribute towards this facility. Thus although one can think in terms of a cost recovery the recovery can at best be partial only.

Keeping the UNICEF norm of one hand pump per fifty households in mind on one hand and the average cost of Rs.10,000.00 to Rs.13,000.00 per hand pump on the other, total recovery would imply that each household must contribute around Rs.200.00. In our questionnaire we, therefore, kept three cost recovery options against which we got the responses from the sample households. The first option involved a subsidy of 50 per cent. Thus each household is asked to pay Rs.100.00 of this Rs.20.00 is to be paid initially and the rest in eight monthly instalments of Rs.10.00 each. The second option had a subsidy component of 75 per cent and each household pay Rs.50.00. The initial payment remains Rs.20.00 and the balance in six monthly instalments of Rs.5.00each. For those respondents who felt the above options too expensive we left an open option where we let them decide how much they were willing to pay on their own free will.

Out of the total sample of 50 only 12 respondents declined to accept any of our three options. These 12 respondents are twice as many as compared to Kanpur where there were only six respondents who declined to accept any of these options. It had already been pointed out that 12 of our respondents had their own source of water supply. It is from this group of 12 that people have declined to contribute towards the cost of public hand pumps.

Out of the total sample of 50, 38 were willing to instal hand pumps in their areas and 12 respondents those who were having their own source of water supply were not willing to

contribute towards this scheme. Out of these 38 respondents 27 were willing to pay Rs.100.00 each for the initial payment and 11 were willing to contribute Rs.50.00 each. There were no any respondent indicated their willingness in third categories.

We also related cost recovery to the income levels of the respondents. Out of the 38 respondents willing to contribute towards the cost of hand pumps seven are in the lowest income group (below Rs.400.00 per month). The rest are almost evenly distributed among the two other income groups. There was a positive relationship between the level of income and proposed contribution. Thus more people from higher income group were willing to pay Rs.100.00 each while cent per cent from the low income group opted to pay Rs.50.00 each.

It is difficult to conceive of a system of public payment where we can discriminate one section from another for the same facility. So although we have had different responses regarding cost recovery we shall have to think in terms of a common amount that shall have to be collected from each household. Although a higher number of respondents are willing to adopt the 50 per cent subsidy scheme, this is primarily because of the difficulties faced by them in getting water. However the average household income in Mirzapur (Rs.776.00) is much lower than that of Kanpur (Rs.1,020.00) and, therefore, it is suggested that even in Mirzapur we should offer the people a cheaper scheme. We, therefore, feel that the option which offers a 75 per cent subsidy will be most suitable. According to which

each household will contribute Rs.50.00. Since 100 per cent of the household have shown their willingness to make the system of payment more convenient by reducing the initial payment and increasing the number of instalments. Initially, therefore, we may ask for Rs.10.00 each and the balance in ten monthly instalments of Rs.4.00 each.

(b) Maintenance of the Public Hand Pumps

It is suggested that a nominal amount of rupee one be collected from each household to meet the maintenance cost of the hand pumps. Since one hand pump per fifty households is being proposed, fifty rupees per month will thus be collected for its maintenance. The washer of the India Mark II hand pump needs to be changed from time to time, but their cost is only around Rs.5.00 each. The hand pump is otherwise of good quality and does not need much maintenance. It is only when some major faults develop in it that heavier amount of money is needed for the repair work. The amount contributed per month Rs.50.00 should be sufficient to meet not only the expenditure on purchase of new washers but to meet the slightly higher costs of repair work when needed.

Only ten out of our 50 respondents have refused to contribute towards the maintenance of the hand pump. So about 80 per cent of our respondents were ready to pay for maintenance of hand pumps. It is clear that the general attitude rather than his paying capacity which prompted him to say no. However, once the hand pump is installed this person may himself come forward to pay Re.1.00 or may be easily motivated to do so.

(c) Low Cost Sanitation Scheme

Since sanitation is an important aspect, the low cost sanitation programme should be given boost. However, it was felt that residents having low income and therefore finding it unmanageable to adopt the scheme may be given a 50 per cent subsidy. According to our proposal willing people will have to make an initial payment of Rs.150/- and will subsequently pay Rs.12.50 per month for three years. We therefore asked the respondents whether they would be willing to get a clean and hygenic private latrine constructed if a subsidy of 50 per cent was offered. The response was 60 per cent willing to adopt low cost sanitation scheme. This percentage is low as compared to Kanpur percentage as it was 80 per cent. This is understandably so since the average income of Mirzapur is relatively lower than that found in Kanpur. This degree of willingness implies that only middle income strata are keen to adopt this scheme. Although we feel that a general subsidy of 50 per cent should be offered to everyone, if the authorities feel otherwise they may provide the subsidy to the people upto a certain income level only. The scheme might also be available to the SC/ST population.

(d) Public Service Latrines

Nagar Mahapalika Authorities had given an estimate figure of Rs.50,000.00 as the average cost for constructing an eight seat public sanitation complex. As against this figure the Sulabh International have their own separate cost estimates for ten seat complex having either sewer connection or septic tank. The estimated cost being Rs.1.77 lakhs and Rs.2.29 lakhs

respectively since the estimates of Sulabh International are around four times as higher as those of the Nagar Mahapalika it is not worthwhile to go for the Sulabh complexes in these areas.

Regarding the cost recovery aspect of the public sanitation scheme is concerned, since cost involved is very high, recovery can not be expected in a low income area. Still, we asked people whether they would be willing to pay Rs.250.00 towards the cost of this complex of this Rs.30.00 is to be paid initially and rest in two years at the rate of Rs.10.00 per month. Besides this we also kept an open option where we allowed the respondents to suggest how much he could pay. In all the four areas taken together only eight respondents were found willing to pay Rs.250.00. Three more wanted to contribute but two said that they could afford to pay Rs.142.50 and other one said that he can pay Rs.135.00. It is, therefore, evident that in the case of the public service latrines peoples willingness is of a very low order despite the fact that at present people have a genuine sanitation problem. The respondents were asked about their willingness to contribute Rs.5.00 per month towards the maintenance of the public service latrines. Here again the response was very poor with only nine out of 50 respondents found willing.

The low response in case of public latrines can be directly linked to the high percentage of respondents who have already shown their willingness in favour of the subsidised low-cost sanitation scheme. However it must not be forgotten that there are numerous residents in these areas who either do not have space to construct a private latrine or do not have the means

to afford it even after the subsidy and others who are living in rented houses. All these categories of people can not have the improved type latrines.

It should therefore be obligatory on the part of the state to ensure that the existing sanitary conditions be improved even if the entire cost of it has to be paid by it. The individual, especially illiterate or semi-literate can not very easily be asked to pay for these services through lectures on hygene. He has been so used to going out in open space that it does not really matter to him much specially if the alternative, even though more convenient, involves money. Thus to maintain proper hygene it is important to ensure that the existing sanitation facilities be improved. This will also help in controlling pollution.

6. <u>People's Willingness to Offer Free Service in the Installation and Maintenance of Public Services</u>.

Maintenance is a crucial aspect and should therefore be looked into carefully. It is generally observed that a public tap or a public hand pump once installed is rarely looked after and properly maintained either by the authority who put it up or by those who take water from it. The same was brought out by our survey in the four areas where we found broken taps and hand pumps and abandoned public latrines. From the people's response during our survey it was brought out that 44 respondents out of 50 respondents were willing to offer their free services at the time of installation of a

hand pump or the construction of public service latrines. Likewise, an equal number are also willing to extend their co-operation in the maintenance of these services. By and large in most of the cases those respondents who are willing to pay Rs.100.00 towards the cost of the hand pump are the ones not willing to offer their services since they feel their contribution has already been assured in monetary terms. However, about the same number of respondents are willing to get proper training in the operation and maintenance of the hand pumps.

General Picture of the Selected Areas of Mirzapur for the In-Depth Study.

1. Ojhala Pul/Mallahan

Ojhala Pul/Mallahan is the Rural part of Mirzapur district and is well connected with pucca road which is leading from Mirzapur to Vindhyanchal. This particular road divides Ojhala Pul/Mallahan into two parts. One which is situated just on the bank of Ganga river, commonly known as Mallahan because of Mallah caste dominated area and most of the population is residing at this end. Second part which is one the left side of the road and newly established with pucca constructed houses known as Ojhala Pul. Ojhala Pul/Mallahan is partially electrified area but most of the houses do not have electric connection.

The total population of the area is approximately 805 and number of households are 115. The large portion of this population living in Mallah as about 80 per cent population residing over there because Mallah is situated just on the bank of

Ganga river and the people of this area prefer this portion as they feel that they can fetch water from Ganga river and also catch fish from this river. On the other hand 20 per cent population residing on the left side of the dividing road is busy in carpet and dari weaving business. They are having the advantage of transportation as road is very near to this area as compared to Mallahan.

The major castes residing in this area are Mallaha, Klatik, Ahir, Yadava, Muslim and Chamar. Mallaha and Chamars are living in Mallahan and few Muslim families are also living here. Other castes are busy in Dari and Carpet weaving and families mainly male persons of the family are daily wage labour in Dari and Carpet weaving activity. To sum up, the people of this areas are busy in Dari and Carpet weaving, fishing and agriculture and rest are agricultural labour or labour class. Economic condition of this area is not good.

The number of wells in this area are seven. Out of these seven wells one is dry well. Only a single private hand pump is there and this family is not allowing others to fetch water from this hand pump. There is no public hand pump in this area. There are seven private taps and three public taps operating in Mallahan. Present water supply facility is not sufficient, safe drinking water problem is there, people are not getting water according to their need. People are very keen and ready to pay for installation of hand pumps in their areas. They are also willing to offer free manual labour at the time of installation of hand pumps.

Regarding sanitation facilities there are three private latrines - all these three are bucket types. There is no public latrines in this area. Although sanitation facilities are not sufficient - no drainage system, no sewer line. Water logging problem is there even then people are not willing for low cost sanitation scheme but few of them are interested in public latrine facility.

2. Chandra Deepa

Chandra Deepa is also a rural part of the Mirzapur city and well connected with pucca road which is leading from Mirzapur to Allahabad. Total population of this area is about 1050. Each family having 6 to 8 family members so on an average seven persons are found in a single family including male, female, children and adults. Number of households are 150. The area is not electrified.

The major castes residing in this area are Kewat (SC), Pasi, Yadava and few family of Muslims. But this is mainly Kewat dominated area. People of this area are mainly busy in Dari weaving, Doli and agricultural activities i.e. few of them are having their own land and other are agricultural labour. In two families the head of the house pulling Rickshaw. Most of them are economically very weak.

Regarding present water supply position there are five wells and all are in working condition. Out of these five wells one is a private well. Only a single public tap exists near the road side which is far away from residential area and

so people are not benefited by this tap. No private or public hand pump are present in this area. So water supply is not sufficient and scarcity of safe drinking water is very much there. This is a very acute problem for the entire locality. People are ready to take active part i.e. free manual labour at the time of installation of hand pumps and also ready to pay towards the cost of the hand pumps.

There is no sewer line in this area so far and no proper drainage system. Generally people go far to open spaces, for that they are having plenty of agricultural fields. They are not feeling any problem in doing this type of practice as they feel that they are increasing the fertility of the soil. There are only six private latrines in the entire area. These people are not willing to go in for low cost sanitation scheme and very few of them are interested in public latrines. Water logging problem is also there.

3. Chhota Mirzapur

Chhota Mirzapur is an urban area of Mirzapur. With other parts of the city Chhota Mirzapur is well connected with pucca roads. This is partially electrified and most of the houses are electrified. The total population of this area is approximately 2800 and number of households are about 400. Most of the houses are pucca constructed and few are still lying in kachha condition.

Chhota Mirzapur is a Muslim dominated area. About 80 per cent of the total population are Mohammedan and rest 20 per cent belong Hindu i.e.Baniya, Chamar,Brahmin and Kayastha,etc.

Economic condition of the people of this area isbetter as compared to all other areas which we have selected for our study. They are busy in carpet and dari business, milk business and other are service class.

Although safe drinking water is available as five public taps and six wells are supplying water but they are not sufficient to fulfil the requirement of the area. Because there is no hand pumps running in this area and water supply in public and private taps is very irregular. There are as many as 82 private taps connection but water supply is very irregular. So people are willing to pay money, for hand pumps and also ready to offer manual labour at the time of installation of hand pumps.

Sanitation facilities are also better and drainage system is good. A sewer line is also there which is constructed by a private mill to take care of their affluents. No water logging problem is found in this area because drainage system is proper. People are having 74 private latrines in their houses but no public latrine is there in this area. People are generally interested in low cost sanitation scheme and other are interested for public latrines as they are not having space to spare for latrine in their houses.

4. Dev Purwa

Dev Purwa is also an urban part of the Mirzapur. This is well electrified and well connected with roads. But roads are not well maintained and water logging becomes a serious problem.

Total population of this area is approximately 1155 and number of households are about 165. Muslim dominated area Dev Purwa having 55 per cent Mohammedans and 45 per cent Hindus. Out of these 45 per cent Hindu 20 per cent are SC rest are Teli, Kalwar, Khatik, Kushwaha, Kori, Nai and few Brahmins.

Most of the population of this colony is labour class. They are making Beedi, weaving dari and kalins and agricultural labour and few of them are in service.

There are seven wells in this area and one public tap. Two hand pumps are there. People are having 75 private taps connections in their houses. Due to irregular supply of water in taps and inadequate number of hand pumps (2) people are desirous of having hand pumps in their area and are ready to pay money as well as offer free manual labour at the time of installation of hand pumps.

Drainage system is not very good. Water logging problem is there. A sewer line is there but not in working condition. 77 private latrines and two public latrines are there but these two public latrines are not in working condition. People are ready and willing to pay for low cost sanitation scheme and public latrines. They are also ready to offer their free manual labour at the time of installation of hand pumps and construction of public latrines in their area.

Status of Existing Service Facilities in Mirzapur

Name of the Area	Estimated population	Estimated household	Pipe Water Supply				Hand Pumps				Wells				Latrines				
			Private		Public		Private		Public		Private		Public		Private	Public		Public	
			Working	Non-Working	Working	Non-Working	Working	Non-Working	Working	Non-working	Working	Non-Working	Working	Non-Working		Male Seat	Female Seat	Male Seat	Female Seat
Chhota Mirzapur	2800	400	82	-	5	-	-	-	-	-	2	-	4	-	74	-	-	-	-
Dev Purwa	1155	165	75	-	1	1	1	-	1	1	7	-	-	-	77	10	10	10	10
Ojhala Pul/ Mallahan	805	115	7	-	3	-	1	-	-	-	-	-	6	1	3	-	-	-	-
Chandra Deepa	1050	150	-	-	1	-	-	-	-	-	1	-	4	-	6	-	-	-	-

Table No.1 : General Characteristic of Respondents

CITY/AREA	Caste			Educational level of the Head				Type of House			No. of Rooms		
	Hindu	Muslim	SC/ST	Illi-terate	Read & Write	Upto Inter	Above Inter	Kucha	Pucca	Kuchha/ Pucca	1	2	3 and Above
KANPUR													
1. Oonona Tila	2	12	-	6	7	1	-	13	1	-	5	7	2
2. Chhabila Purwa	8	1	3	5	7	1	-	3	5	4	1	3	8
3. Gajju Purwa	7	3	2	3	9	-	-	6	5	1	2	2	8
4. Om Purwa	3	1	8	4	5	2	1	5	7	-	6	2	4
Total	20	17	13	18	28	4	1	27	18	5	14	14	22
MIRZAPUR													
1. Dev Purwa	2	8	3	7	6	-	-	6	6	1	1	5	7
2. Chhota Mirzapur	2	5	5	1	8	3	-	2	7	3	-	3	9
3. Chandra Deepa	2	-	10	8	1	3	-	5	3	4	2	3	7
4. Ojhala Pul/ Mallahan	1	-	12	6	7	-	-	7	5	1	2	5	6
Total	7	13	30	22	22	6	-	20	21	9	5	16	29

Table No.2 : Family Composition and Family Income Group

CITY/AREA	Size of Family				Income Group (Rs.)				Source of Income				
	Upto 4	5 - 7	8+	Avg. Size	Upto 400	401- 800	801+	Avg.HH Income	Wage Labour	Business Trade	Ser- vice	Self- Employees	Others
KANPUR													
Oonchc Tila	6	5	3	5.37	8	3	3	860.71	-	7	7	2	-
Chhabila Purwa	-	7	5	8.17	5	1	6	1341.67	4	5	7	3	-
Gajju Purwa	-	7	5	7.00	5	4	3	708.33	5	4	4	1	3
Om Purwa	4	5	3	6.50	3	4	5	1195.83	2	3	8	-	2
Total	10	24	16	6.70	21	12	17	1020.00	11	19	26	6	5
MIRZAPUR													
Dev Purwa	2	5	6	7.46	3	8	2	553.85	9	3	-	3	-
Chhota Mirzapur	2	3	7	8.50	-	6	6	987.50	6	4	5	1	-
Chandra Deepa	1	5	6	8.50	1	5	6	795.83	10	-	1	2	1
Ojhala Pul/ Mallahan	-	7	6	9.38	3	4	6	784.61	6	4	3	-	3
Total	5	20	25	8.46	7	23	20	776.00	31	11	9	6	4

Table No.3 : Details of Water Supply Facilities

CITY/AREA	Own Water Supply		Type of Own Water Source		In Case of Tap Water Supply				If Not Own Water Source then other source of Water Supply**				
	Yes	No	Tap	Hand Pipe	Regular	Irregular	Avg. Duration (Hrs.)	Avg. Water Charge pa.	Pub. Tap	Pub. Hand Pipe	Well	Neighbour	Pvt. Tube Wells/ Others
KANPUR													
Ooncha Tila	1	13	1	-	-	1	1	100.00	1	-	9	1	3
Chhabila Purwa	5	7	5	-	2	3	2	265.00	2	-	9	-	-
Gajju Purwa	2	10	-	2	-	-	-	-	-	-	7	-	4
Om Purwa	2	10	1	1	-	1	1	400.00	2	-	8	-	1
Total	10	40	7	3	2	5	1.45	260.00	5	-	33	1	8
Mirzapur													
Dev Purwa	5	8	5	-	-	5	2.15	39.60	3	-	5	1	-
Chhota Mirzapur	6	6	6	-	4	2	4.15	43.30	6	-	-	-	-
Chandra Deepa	-	12	-	-	-	-	-	-	-	-	12	-	-
Ojhala Pul/ Mallahan	1	12	-	1	-	-	-	-	4	-	7	-	1
Total	12	38	11	1	4	7	3.30	41.60	13	-	24	1	1

NOTE : ** - Responses where there is more than one source.

Table No.3 (Contd....)

CITY/AREA	Distance Covers***			Number of Trips@			Average Time taken per trip			Average Daily Water Requirement			
	Less than 250M	250-500M	Avg. distance(M)	Upto 5	6-9	10& above	Upto 5 M	6-15 M	Over 20 M	Total Water requirement	Drinking water	Total Water requirement (p.Person)	Drinking Water requirement (p.person)
KANPUR													
Ooncha Tila	11	3	250	3	8	3	7	7	-	227.15	49.29	42.30	9.18
					(Avg.7.36)		(Avg.12.00 min)						
Chhabila Purwa	11	-	200	1	4	5	7	2	1	285.00	84.00	34.88	10.28
					(Avg.9.0)		(Avg.11.25 min)						
Gajju Purwa	8	3	250	3	5	2	6	2	2	225.00	52.50	32.14	7.50
					(Avg.7.2)		(Avg.15.50min)						
Om Purwa	11	-	200	2	4	5	10	1	-	263.18	55.91	41.26	8.60
					(Avg.9.27)		(Avg.7.45 min)						
Total	41	6	225	9	21	15	30	12	3	248.33	59.33	37.06	8.86
					(Avg.8.29)		(Avg.12.00min)						
MIRZAPUR													
Dev Purwa	9	-	200	1	3	5	4	2	3	275.00	60.00	36.86	8.04
					(Avg.9.33)		(Avg.17.45min)						
Chhota Mirzapur	5	1	230	2	2	2	4	1	1	240.00	55.00	28.23	6.47
					(Avg.8.5)		(Avg.14.5 min)						
Chandra Deepa	12	-	200	1	4	7	3	6	3	281.25	56.25	33.09	6.62
					(Avg.10.00)		(Avg.18.45min)						
Ojhalpul/ Mallahan	12	-	200	2	4	6	4	4	4	348.75	71.25	31.37	7.60
					(Avg.12.5)		(Avg.25.00min)						
Total	38	1	205	6	13	20	15	13	11	294.23	61.54	34.78	7.27
					(Avg.10.38)		(Avg.19.45min)						

NOTE: *** - Responses in accordance with the Source of Water
@ - Even those with own taps but irregular supply have to fetch water from outside.

Table

Table No;3 (Contd....)

CITY/AREA	WHO BRINGS WATER			QUALITY OF WATER		Average Time Spent per HH per day on fetching water
	Male	Female	Child	Good	Not Good	
KANPUR						
Ooncha Tila	13	5	3	5 (35.71)	9 (64.29)	1 hr. 40 mts.
Chhabila Purwa	9	10	-	8 (80.00)	2 (20.00)	1 hr. 40 mts.
Gajju Purwa	7	9	-	4 (40.00)	6 (60.00)	1 hr. 15 mts.
Om Purwa	11	10	-	10 (91.00)	1 (9.00)	1 hr. 05 mts.
Total	40	34	3	27 (60.00)	18 (40.00)	1 hr. 25 mts.
MIRZAPUR						
Dev Purwa	3	6	6	9 (100.00)	- (0.9)	3 hrs.
Chhota Mirzapur	5	3	2	5 (83.33)	1 (16.67)	2 hrs. 20 mts.
Chandra Deepa	9	8	3	10 (83.33)	2 (16.67)	3 hrs. 10 mts.
Ojhala Pul/ Mallahan	9	6	8	10 (83.33)	2 (16.67)	2 hrs. 55 mts.
Total	26	23	19	34 (87.18)	5 (12.82)	2 hrs. 55 mts.

Table No.4 : Details of Private and Public Sanitation Facilities

CITY/AREA	Information About Private Latrine			Type of Private Latrine			People using open space	Does	
	Yes	No	Total	Bucket	Sewer	Septic Tank		Yes	No
KANPUR									
Concha Pila	7	7	14	5	-	2	7	-	-
Chhabila Purwa	-	12	12	-	-	-	12	*	-
Gajju Purwa	4	8	12	4	-	-	8	*	-
Om Purwa	1	11	12	-	1	-	11	-	-
Total	12	38	50	9	1	2	38	-	-
MIRZAPUR									
Dev Purwa	4	9	13	4	-	-	9	-	-
Chhota Mirzapur	3	9	12	2	-	1	9	-	-
Chandra Deepa	-	12	12	-	-	-	12	-	-
Ojhala Pul/ Mallahan	-	13	13	-	-	-	13	-	-
Total	7	43	50	6	-	1	43	-	-

NOTE : * - 2

Table No.5 : Details Regarding Cost Recovery of Hand Pipes

CITY/AREA	Willingness to Instal Hand Pipe			If Willing, Charges to be Paid		Open Option*(Avg.Rs)			Willingness to pay Re.1/- for Maintenance	
	YES	NO	TOTAL	Rs.100	Rs.50	Ist Instalment	Next Instalment	No.of months	Yes	No
KANPUR										
Ooncha Tila	13	1	14	4	7	Rs.5/-	Rs.2/-	10	14	-
Chhabile Purwa	10	2	12	6	2	Rs.25/-	Rs.11/-	2	11	1
Gajju Purwa	12	-	12	6	5	Rs. 5/-	Rs.2/-	10	12	-
Om Purwa	9	3	12	2	7	-	-	-	12	-
Total	44	6	50	18	21	Rs.13/-	Rs.5.60	6.8	49	1
MIRZAPUR										
Dev Purwa	9	4	13	5	4	-	-	-	9	4
Chhota Mirzapur	7	5	12	6	1	-	-	-	8	4
Chandra Deepa	11	1	12	8	3	-	-	-	11	1
Ojhala Pul/ Mallahan	11	2	13	8	3	-	-	-	12	1
Total	38	12	50	27	11	-	-	-	40	10

NOTE : * - There are 5 Respondents in the open case

Table No.6 : Details of Cost Recovery of Private/Public Latrines

CITY/AREA	Willingness for low Cost Private Latrine			Willing to pay for Public Latrine		If willing to pay for Public Latrine					Willingness to Pay Rs.5/- p.m. for maintenance	
	Yes	No	Total	Yes	No	Rs. 250 Nos.	Open Case* Initial (Rs.)		Instalment	Yrs.	Yes	No
KANPUR												
Ooncha Tila	11	3	14	1	13	-	1	20.00	Rs.5.0	1	1	13
Chhabila Purwa	12	-	12	-	12	-	-	-	-	-	-	12
Gajju Purwa	10	2	12	2	10	1	1	20.00	Rs.2.0	1	1	11
Om Purwa	9	3	12	-	12	-	-	-	-	-	-	12
Total	42	8	50	3	47	1	2	-	-	-	2	48
MIRZAPUR												
Dev Purwa	9	4	13	4	9	3	1	15.00	Rs.5.0	2	1	12
Chhota Mirzapur	11	1	12	-	12	-	-	-	-	-	2	10
Chandra Deep	5	7	12	2	10	2	-	-	-	-	1	11
Ojhala Pal/ Mallahan	5	8	13	5	8	3	2	22.50	Rs.5.0	2	5	8
Total	30	20	50	11	39	8	3	-	-	-	9	41

NOTE * - Two Cases from Jajmau and 3 in Mirzapur

Table No.7 : Details of Public Co-operation in Construction, Maintenance and Operation

CITY/AREA	WILLINGNESS TO OFFER FREE SERVICES DURING CONSTRUCTION		MAINTENANCE		OPERATION		Willingness to undertake Training	
	Yes	No.	Yes	No.	Yes	No.	Yes	No
KANPUR								
Ooncha Tila	8	6	8	6	8	6	11	3
Chabile Purwa	7	5	6	6	6	6	11	1
Gajju Purwa	9	3	10	2	10	2	11	1
Om Purwa	7	5	9	3	7	5	11	1
TOTAL	31	19	33	17	31	19	44	6
MIRZAPUR								
Dev Purwa	10	3	10	3	10	3	11	2
Chhota Mirzapur	12	-	12	-	12	-	10	2
Chandra Deepa	12	-	12	-	12	-	12	-
Ojhela Pul/ Mallahan	10	3	10	3	10	3	10	3
TOTAL	44	6	44	6	44	6	43	7

Table No.8 : Cost Recovery Related to Income Groups of Respondents (Hand Pipes

Income Group (in Rs.)	Willing to Instal Public Hand Pipe		If Willing, Charges to be paid					Willingness to pay Re.1/- for Maintenance	
					Open Option*(Avg.Rs.)				
	Yes	No	Rs. 100	Rs. 50	Ist Instalment(Rs)	Next instalment	No. of Months	Yes	No
KANPUR									
Upto Rs.400	20	1	2	13	13.00	Rs.5.60	6.8	20	1
401 - 800	10	2	7	3	-	-	-	12	-
801 and above	14	3	9	5	-	-	-	17	-
MIRZAPUR									
Upto 400	5	2	3	2	-	-	-	6	1
401 - 800	15	8	9	6	-	-	-	17	6
800 and above	18	2	15	3	-	-	-	17	3

NOTE : * - There are 5 respondents in the open option.

Table No.9 : Cost Recovery Related to Income Groups of the Respondents (Private/Public Latrines)

Income Group (in Rs.)	Willingness for low Private Latrines		Willingness to have Pub.Latrine		If willing, Scheme of Payment				Willingness to Pay Rs.5/- for Maintenance	
					Rs.250	Open Case				
	Yes	No	Yes	No	Ist Instalment (Rs.)	Next instalment (Rs.)	No. of Months		Yes	No
KANPUR										
Upto 400	17	4	3	18	1	20.00	3.00	12	3	18
401 - 800	9	3	-	12	-	-	-	-	1	11
801 and above	16	1	-	17	-	-	-	-	-	17
MIRZAPUR										
Upto 400	5	2	3	4	1	17.50	5.00	24	1	6
400 - 800	11	12	3	20	3	-	-	-	2	21
801 & above	14	6	5	15	4	15.00	5.00	24	6	14